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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,889	07/25/2003	Gregory V. Hofer	200208326-1	3820
22879 7590 01/25/2008 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			EXAMINER TRAN, NHAN T	
			ART UNIT 2622	PAPER NUMBER
			NOTIFICATION DATE 01/25/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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**Office Action Summary**

Application No.

10/627,889

Applicant(s)

HOFFER, GREGORY V.

Examiner

Nhan T. Tran

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 22-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/8/2007 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-19 and 22-24 have been considered but are moot in view of the new ground of rejection.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-19 and 22-24 are rejected under 35 U.S.C. 102(a) as being anticipated by Sannoh et al. (US 2003/0071908).

Regarding claim 16, Sannoh discloses a digital imaging device (Figs. 1A-2 and paragraph [0072], comprising:

an image sensor (CCD 102 in Fig. 2);

a lens (202 in Fig. 2) configured to focus a first view of a scene onto the image sensor;

a display (LCD 207 shown in Figs. 1C & 2) configured to display the first view of the scene (i.e., a first view of the scene as shown in Fig. 5 or Fig. 6, see paragraph [0104]);

a processor (controller 115 including CPU 115a shown in Fig. 2) configured to mark an object in the displayed first view of the scene (see Fig. 5 or Fig. 6 and paragraph [0104], wherein the faces of the human objects are marked with A1 and A2);

the display configured to display a second view of the scene where the object is no longer visible, wherein the second view of the scene is subsequent to the first view of the scene (this is encompassed by disclosure of Sannoh when the person shown in Fig. 5B quickly moves out of the camera's field of view or the camera is accidentally directed to another view other than the current view shown in Figs. 5B & 6B. In this case, the person is not visible on the display);

the display configured to display a third view of the scene where the object is visible, wherein the third view of the scene is subsequent to the second view of the scene (this is the case where the person returns back to the camera's field of view or the camera is directed back to the previous scene of the person. Thus the person is visible again on the display);

the processor configured to remark the object in the displayed third view with a marker (see Fig. 5B or Fig. 6B and paragraph [0098]-[0104] and note that the person's face is again *automatically* detected and marked by the CPU 115a when the person returns to the scene or the camera is again directed to the person in the third view);

the processor configured to perform a correlation computation directly between coordinates of the object in the first view of the scene and coordinates of the object in the third view of the scene to make a determination of a change in direction and/or distance of the object in the third view of the scene relative to the first view of the scene (see paragraphs [0104]-[0105], [0115]-[0117] and [0128], wherein the CPU 115a must know coordinates of the person's face on the display in order to mark the person's face as shown in Figs. 5B and 6B whenever object is visible in the first view and third view. Also inherent in the Sannoh's invention is that a change of direction and/or distance between the person's face in the first view and third view must be determined by the CPU 115a in order to instruct the display to move the marker A in the first view to a corresponding position on the person's face in the third view when the person returns to the scene because the face detection and marking in Sannoh are automatically performed such that the person's face is marked and tracked from one position to another for automatic focusing. *In another interpretation*, the CPU 115a inherently performs a correlation computation between coordinates of the person's face in the first scene and coordinates of the person's face in the third scene when the person returns to the scene in order to determine a latest focus point from the previous focus point for performing focusing operation as disclosed. Since the person is not visible in the

second view, there is no focus point set in this view. However, when the person is returned to the scene in the third view, the latest focus point is detected as the person's face and the lens is driven to focus to the person's face at this time. Note that the latest focus point is not necessarily the same as that of the previous focus point. Thus, a correlation must be performed to determine a change in direction and/or distance from the previous focus point of the first view to the latest focus point of the third view in order for the camera to properly perform automatic focusing as disclosed).

Regarding claim 17, as discussed in claim 16, the object is no longer visible in the second view of the scene due to a change in the field of view of the digital imaging device (the camera is accidentally directed to another view other than the first view).

Regarding claim 18, Sannoh also anticipates that the object is no longer visible in the second view of the scene due to a movement of the object (the person moves out of the camera's field of view as mentioned in claim 16).

Regarding claim 19, Sannoh also discloses the same subject matter of claim 19 as discussed in claim 16. Furthermore, Sannoh discloses:

a control (user operation section 108 in Fig. 2) configured to allow user input into the digital imaging device (see paragraph [0085]);

a processor (controller 115 including CPU 115a) configured to monitor the control (see paragraphs [0087]-[0088]);

the processor configured to establish an initial frame of reference (i.e., initial frame as shown in Figs. 5 and 6) when detecting user input from the control (i.e., when the user pushes button 211, paragraph [0092]-[0093] and [0104]); the processor configured to display a marker (i.e., A1, A2) on the display at a predetermined location with respect to the initial frame of reference, wherein the predetermined location corresponds to an object (see Figs. 5B and 6B, paragraphs [0104]);

the processor configured to compare multiple views of the scene (i.e., multiple frames of motion picture mode), captured by the image sensor, to track the movement of the digital imaging device with respect to the initial frame of reference through performance of a correlation computation directly between coordinates of the predetermined location in the initial frame of reference and coordinates of the predetermined location within the field of view to make a determination of a change in direction and/or distance of the digital imaging device in the field of view relative to the initial frame of reference, whereby the marker is displayed when the predetermined location is within the field of view of the digital imaging device (see paragraphs [0102] and [0104], [0115]-[0117], wherein the person's face is continuously detected and marked by tracking the person's face by the automatic face detection for motion picture as disclosed therein. It is noted that the correlation for a change of direction and/or distance between the person's face in the initial frame and subsequent frames is inherently determined by the CPU 115a in order to continuously and automatically detect, mark and track the person's face for displaying the markers A1, A2 and focusing as mentioned in claim 16);

Regarding claim 22, this claim is also met by the analyses of claims 16 & 19.

Regarding claim 23, Sannoh also anticipates a means for establishing an updated frame of reference (whenever the person's face is detected, the frame of reference is updated and marked) through employment of recordation of coordinates of the object in the current field of view (note that the coordinates of the person's face are always inherently recorded by the controller 115 for tracking the face in a motion mode as disclosed in paragraphs [0102], [0104] and [0115]-[0117]); wherein the means for comparing multiple fields of views comprises means for performing a correlation computation directly between the coordinates of the object in the updated frame of reference and coordinates of the object in a subsequent field of view to make a determination of a change in direction and/or distance of the object in subsequent field of view relative to the updated frame of reference (see paragraphs [0092], [0102], [0104], [0115]-[0117], wherein a change of direction and/or distance between the person's face from one frame to another frame is inherently determined by the CPU 115a for marking the face, displaying and focusing accordingly as discussed in claims 16 & 19).

Regarding claim 24, also seen from Sannoh is that displaying a fourth view of the scene where the object is visible (this is the case where the person is visible on the display in a forth view); remarking the displayed object with the marker in the fourth view



(see Figs. 5B and 6B for repeatedly marking for as long as the person is still visible on the display); performing a correlation computation directly between the coordinates of the object in the third view of the scene and coordinates of the object in the fourth view of the scene to make a determination of a change in direction and/or distance of the object in the fourth view of the scene relative to the third view of the scene (see the analyses of claims 16, 19 and 23 for a similar operation in a repeated manner).

Regarding claim 1, this claim is also met by the analysis of claim 16.

Regarding claim 2, this claim is also met by the analyses of claims 16 & 17.

Regarding claim 3, this claim is also met by the analyses of claims 17 & 18.

Regarding claim 4, as seen in Fig. 6B of Sannoh, a position of a second object (i.e., a second person) is marked in the second view of the scene with a second marker (note that, in this case, the first person in Fig. 6B has moved out from the view and the second person stands still within the view), and the second marker is displayed when the second object is visible in a displayed view of the scene.

Regarding claim 5, it is clear that the method is used in a digital camera (see paragraphs [0071]-[0072]).

Regarding claim 6, as shown in Figs. 5B and 6B, the marker is displayed as a set of square brackets (i.e., four square brackets) that enclose the marker object.

Regarding claim 7, Sannoh also discloses that the scene is displayed on the viewfinder (display LCD 207 as a viewfinder) in a camera ([0090]).

Regarding claim 8, as shown in Fig. 1C, the scene is displayed on the display (LCD 207) on the back of a camera.

Regarding claim 9, as shown in Figs. 5 & 6, the object is marked by centering the object in the display, and then activating a control.

Regarding claim 10, this claim contains the same subject matter as discussed in claims 16, 19, 22 and 1, and thus are also met by the analyses of these claims.

Regarding claim 11, see claim 10, and this claim is met by repeating the steps in claim 10 for detecting and tracking a person's face in another subsequent frame from a previous frame for as long as the person is still visible on the display.

Regarding claim 12, see the analyses of claim 10 & 11 for repeating the steps in claim 11 so that the person is continuously detected and tracked over a plurality of frames for as long as the person is still visible on the display.

Regarding claims 13-15, these claims are also met by the analyses of claims 6-8, respectively.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (571) 272-7371. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



NHAN T. TRAN  
Patent Examiner